



SOUTH BAY CITIES
COUNCIL OF GOVERNMENTS

Sustainable South Bay Strategy and Local Use Vehicle (LUV) Demonstration Program funded by the AQMD

David Magarian
www.southbaycities.org

Background

- Established SB 375 emission reduction techniques are based on the creation of dense corridors to support future rail projects
- The Measure R Program will not add any significant level of rail service into the South Bay for at least 20 years
- The strategy of doubling density only reduces Vehicle Miles Traveled by 8%

The South Bay SB 375 Alternative: Sustainable South Bay Strategy

- The SBCCOG has developed alternative Land Use Strategies and Mobility strategies to meet the SB 375 goals
- Alternative Land Use strategies have been adopted by the SBCCOG Board
 - The Sustainable South Bay Strategy is available for guidance to Cities in the South Bay

Sustainable South Bay Strategy

Tailored strategy for:

- Mature reasonably dense suburbs with poor public transportation such as the South Bay and the Majority of LA County

Principles:

- Reduce VMT by concentrating destinations
- Use Locally Appropriate Vehicles like EVs

Land Use – Status Quo

- Underperforming Retail Corridors



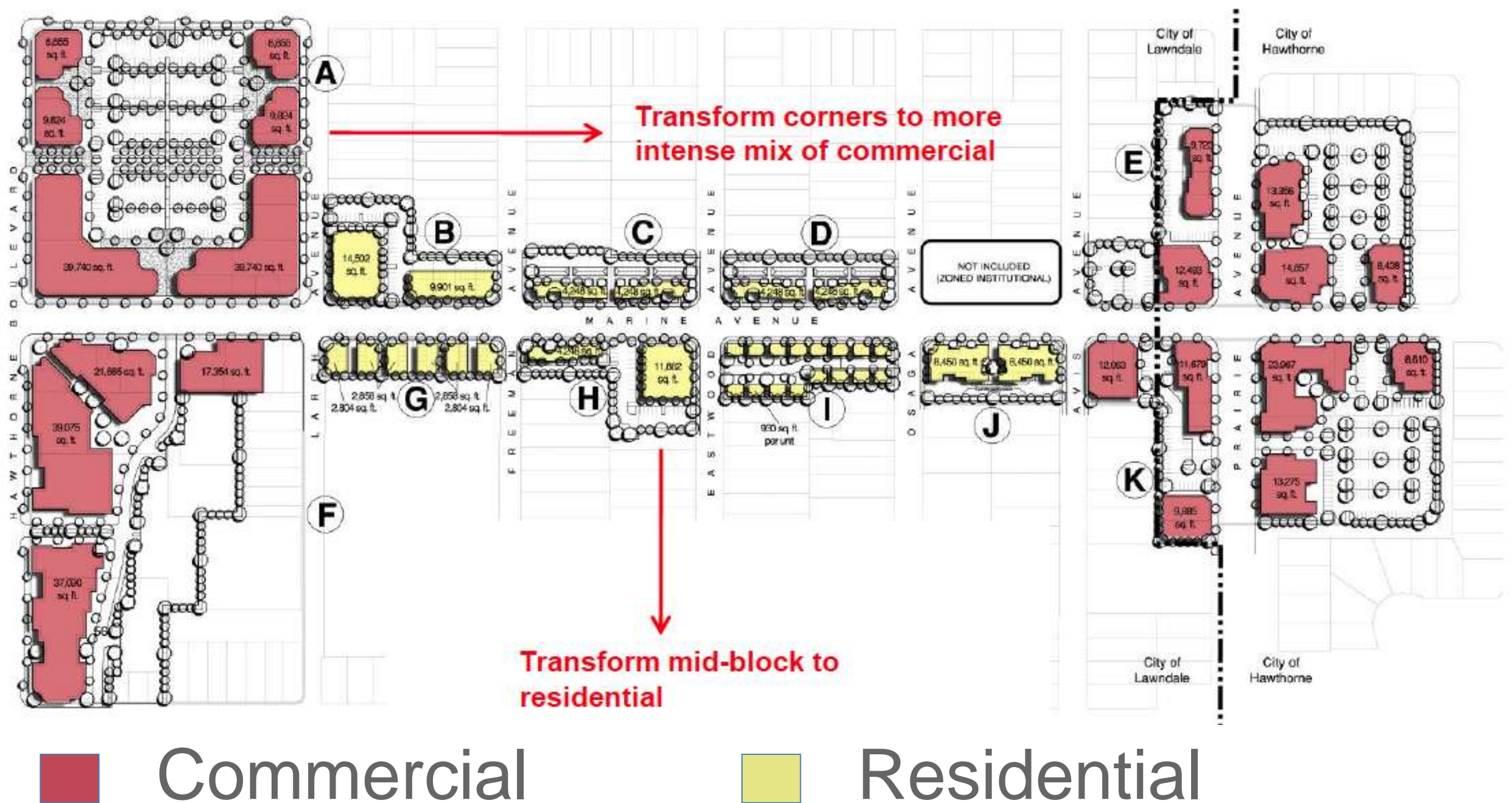
Commercial



Residential

Land Use – Proposed

- Commercial Arterial Intersections with
- Residential In-Between



Mobility Strategy

Promote Walking and Local Use Vehicles

- Clustering destinations encouraging **walking** and the use of **Local Use Vehicles** such as:
 - Bikes
 - Neighborhood Electric Vehicles
 - Other Short Range Electric Vehicles

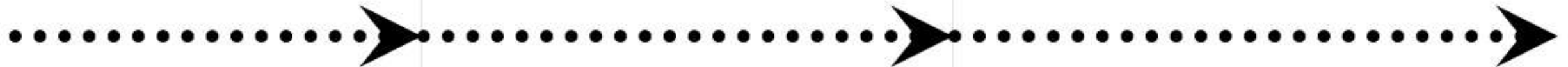
Smart Suburbs

- Promote Local Trips
- Served by Local Use Vehicles

Typical Local
Use Vehicle
Range – 3 mi



Use the right tool to get the job done



0 – 1/2 Miles

Walking

0 – 10 Miles

Short Range Vehicles:

NEV, Segway, EN-V, Bikes,
Shuttles, Buses

≥ 10 Miles

Long-Range Vehicles:

Autos, Bus Rapid Transit
or Subway, Plug-in
Hybrids

The LUV Demonstration Program

A sub-strategy of the Sustainable South Bay Strategy

- The Local Use Vehicle (LUV) demonstration program is designed to prove the value of Short Range LUVs through quantifiable
 - GHG reductions in support of SB 375 goals
 - Improved Air Quality
 - Reduced vehicle miles traveled

LUV Program Introduction

Bridging the Gap Between Walking and Highway Speeds

- A study of 6 Local Use Vehicles (LUVs)
 - 18 month long study (7 months of data have been collected)
 - Selected community members pilot the LUVs for 3-6 months
 - Over 50 drivers will participate in the vehicle testing
- Pilot seeks to validate future programs designed to replace 60% of 2nd and 3rd vehicles in the South Bay
 - There are over 175,000 2nd and 3rd vehicles in the South Bay

Proven Emission Reductions

Where LUVs are Supported by the Land Use

- By replacing gasoline fueled 2nd and 3rd vehicles within our target audience – LUVs can:
 - Reduce GHG emissions by 25% *
 - Reduce Criteria Air Pollutants by up to 40% *

* Emissions reductions are per participating household
not aggregate community savings

Projected Emissions Reductions

- Replacing 60% of the 2nd and 3rd vehicles in the South Bay with LUVs would be the equivalent of:
 - Preventing **14,500** gas vehicles from releasing CO₂*
 - Preventing **17,000** gas vehicles from releasing NO₂*
 - Preventing **154,000** gas vehicles from releasing smog causing Criteria Air Pollutants*

*LUV data applied to 2001 National Household Travel Survey

Driver Profiles

- 6 LUV Vehicles are being used by:
 - Parents chauffeuring their children
 - Commercial Property Managers
 - Active retired individuals
 - Other locally oriented active drivers
 - We are looking for senior communities to test shared use LUVs

Vantage Crewcab



Columbia Summit



Wheego Whip



Wheego Whip

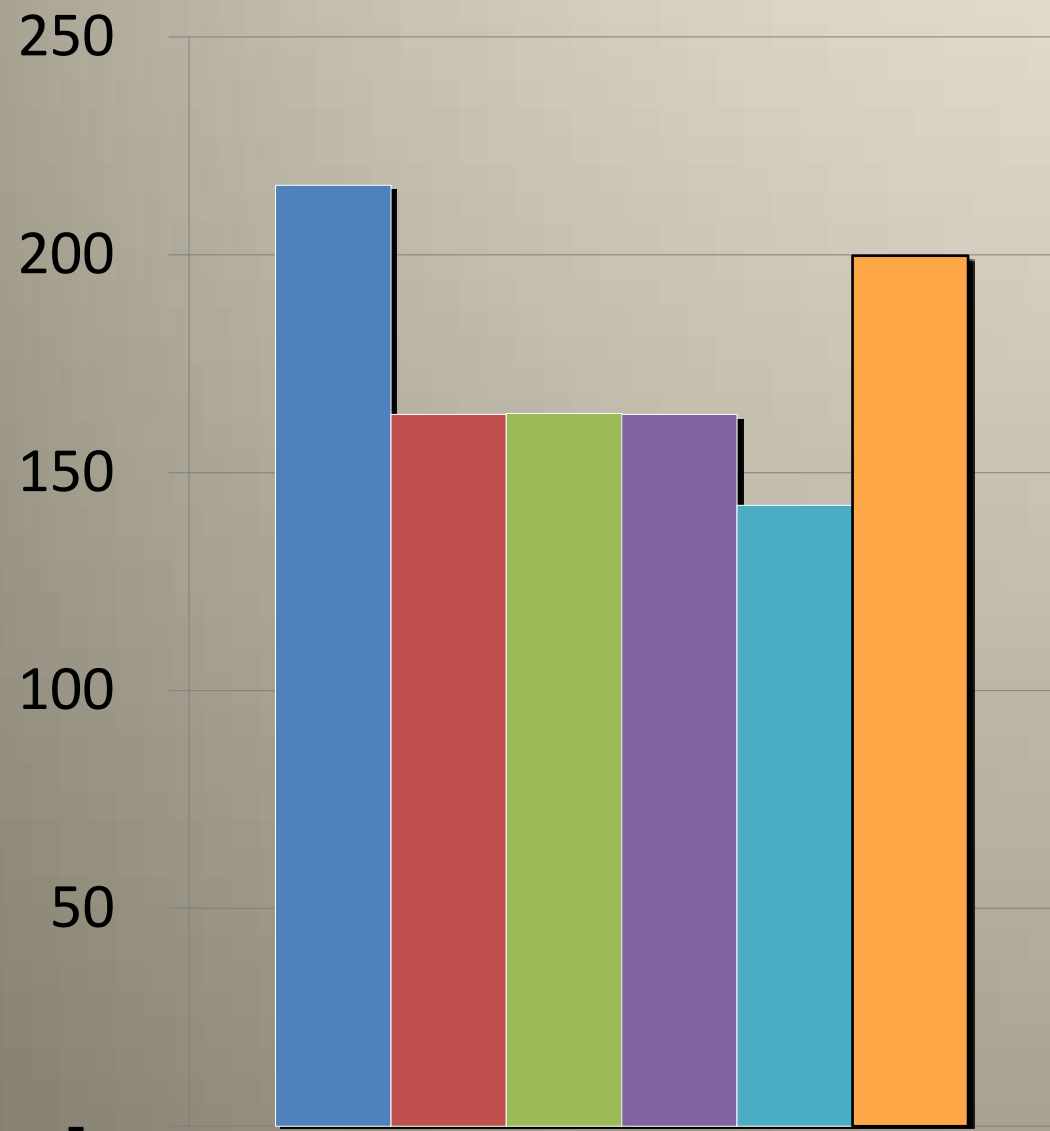


GEM e4

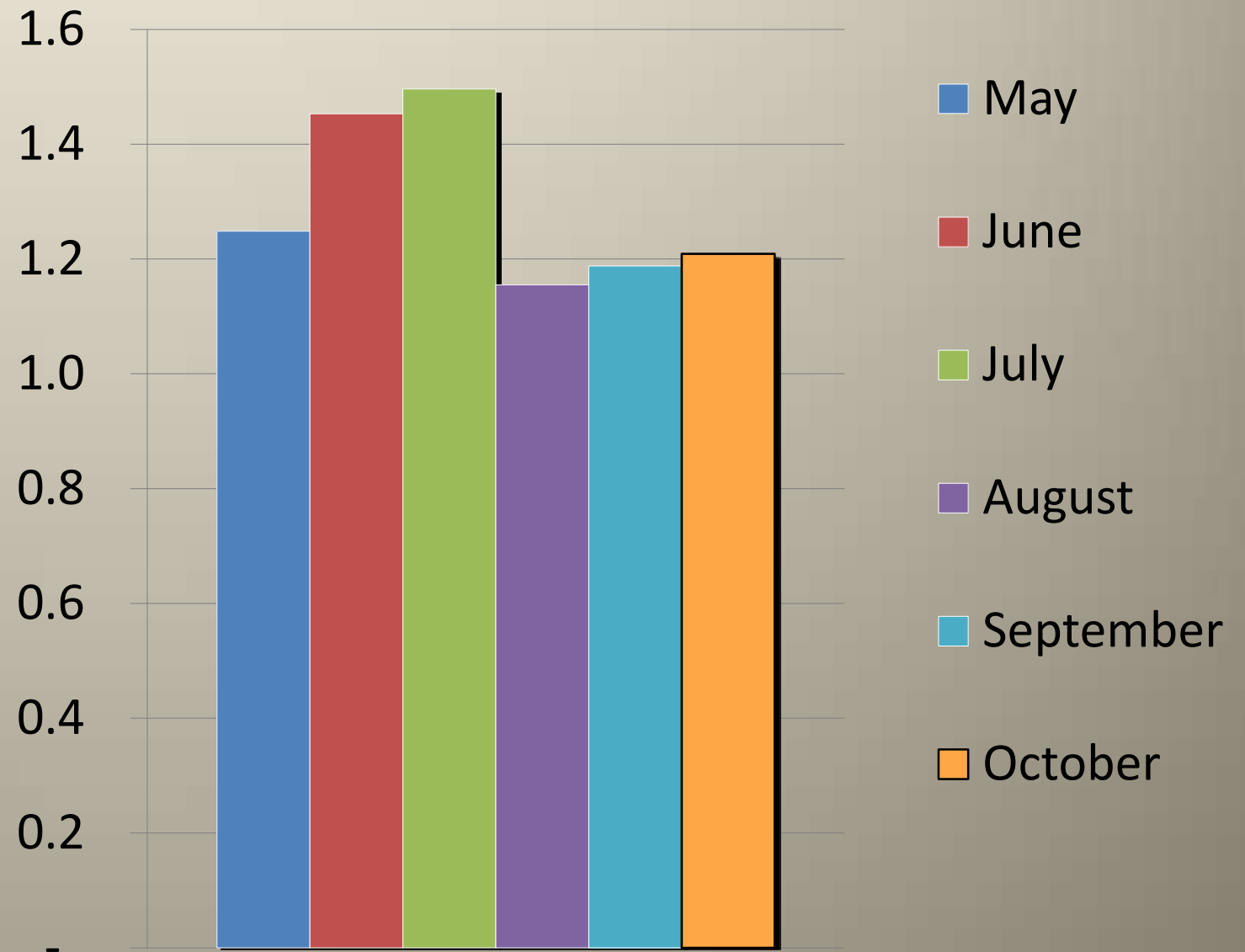


Driving Trends

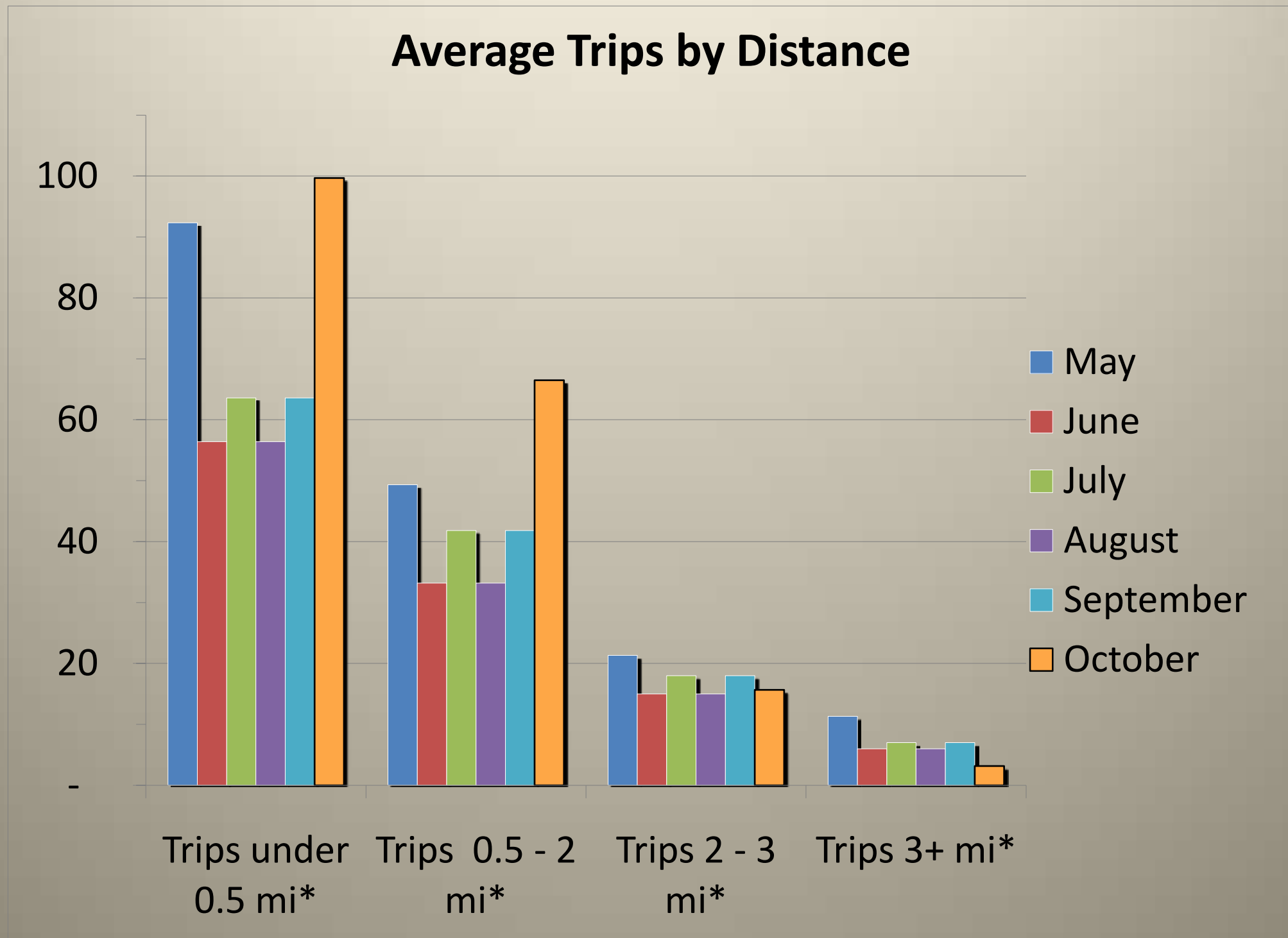
Average VMT/Month



Average Trip Leg Distance

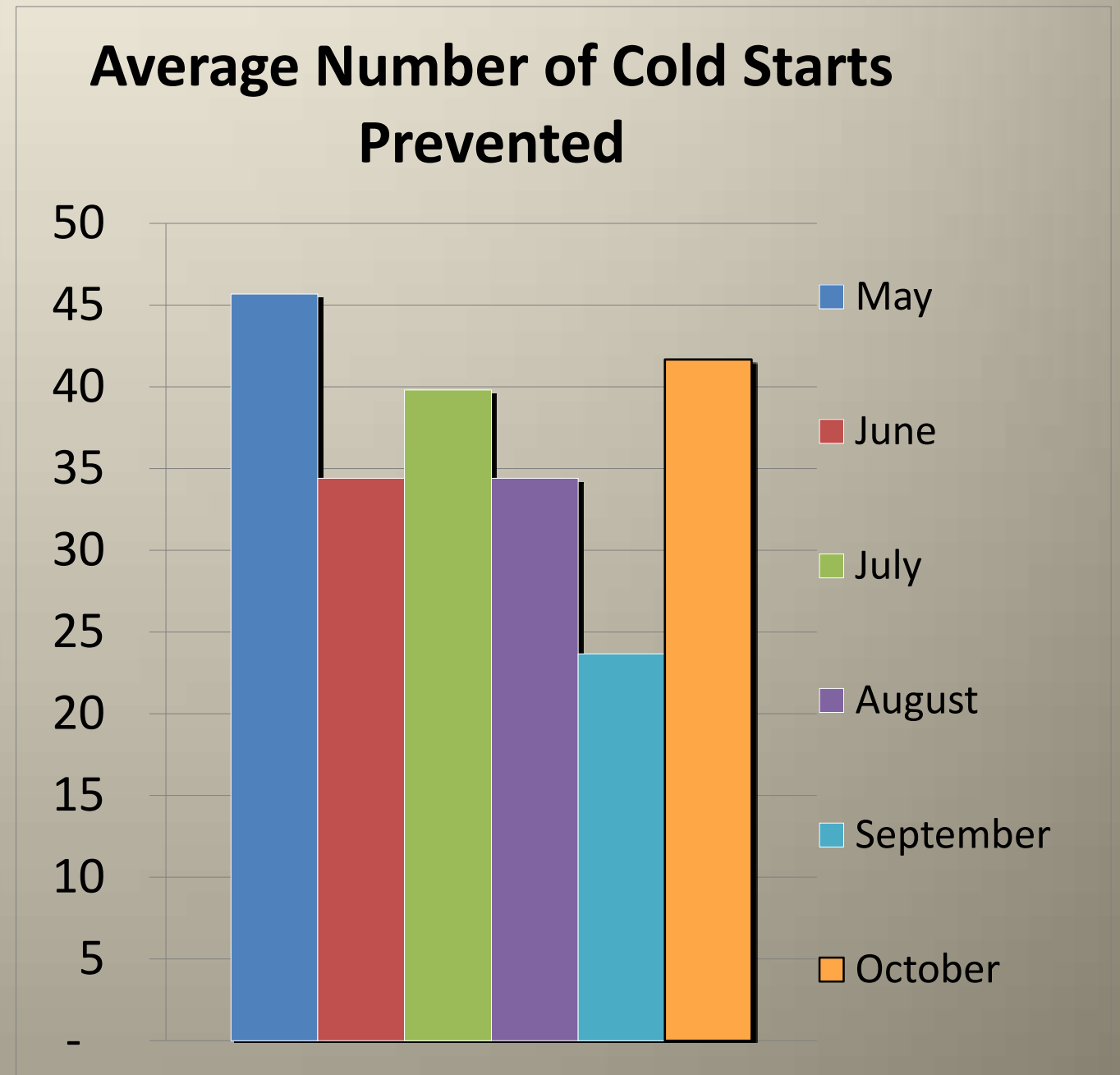


Trip Distance Trends



Cold Starts Prevented

- A cold start is an ignition event when the engine is cold.
- We count a cold start as ignition events occurring when the vehicle has not been used for over 2 hours.
- Cold starts are eliminated by switching from a gasoline fueled vehicle to an electric vehicle.



Projected Monthly Emissions Reductions - for 100,000 LUVs

Projected Emissions Reductions	Projected Emissions reductions (tons)
CO2 Reduction	6,130
NO2 Reduction	7

Projected equivalent number of vehicles taken off the road - by emission type

CO2	14,500
NO2	17,000
Criteria Air Pollutants	154,000

Next Steps

- We are working with SCAG to create a regionally tailored Sustainable Community Strategy
- We are developing strategies to encourage the conversion of the passenger car fleet to EVs including LUVs
- We are working with SCAG, and SCE on a CPI study